Jurnal Cakrawala Akuntansi
P-ISSN 1979-4851
E-ISSN 3123-1918
https://online-journal.unja.ac.id/jca/about

The Effect of Capital Structure and Company Size on Profitability with Operational Efficiency as an Intervening Variable Case Study of Property and Real Estate Companies Listed on the IDX 2020-2023

Prabu Ikhlas[1], Sri Rahayu[2], Misni Erwati[3]
[1,2,3] Department of Accounting, Faculty of Economics and Business, Universitas Jambi, Jambi, Indonesia

Corresponding author email: prabuikhlas12@gmail.com

Info Article

Received: November 2, 2025
Revised: January 22, 2026
Accepted: January 30, 2026
Online Version: February 1, 2026

Jurnal Cakrawala Akuntansi (JCA) is licensed under a Creative Commons Attribution 4.0 International License

Abstract

By positioning operational efficiency as an intermediary lens, this study examines the profitability resulting from capital structure and firm size. This research focuses on property and real estate companies listed on the Indonesia Stock Exchange (IDX) during the 2020–2023 period. Capital structure is measured using the Debt-to-Equity Ratio (DER), company size is measured by the natural logarithm of total assets, operational efficiency is proxied by the Operating Expenses to Operating Income (BOPO) ratio, and profitability is measured by Return on Assets (ROA). The research method used is a quantitative approach with path analysis. A purposive sampling technique resulted in 78 companies as the research sample, resulting in 234 observations during the observation period. Data processing was performed using software version 25. Theoretically, this study contributes to the development of corporate finance literature by broadening understanding of the role of operational efficiency as a mediating variable in the relationship between capital structure, firm size, and profitability in the property and real estate sector in Indonesia. The results of the study indicate that firm size has a positive effect on operational efficiency, while capital structure has a negative effect. Firm size also has a positive effect on profitability, while capital structure has a negative effect on profitability. However, operational efficiency has not been shown to mediate the relationship between capital structure and profitability or between firm size and profitability.

Keywords: *Capital Structure, Company Size, Operational Efficiency, Profitability*

INTRODUCTION

Generally, a company is founded to maximize revenue. It must also maintain profitability through its performance to ensure its long-term survival, ensuring its continued existence and encouraging its continued development. This increasingly rapid growth is accompanied by intense competition between companies, and managers need to implement business strategies carefully and precisely to increase company value and compete in a highly competitive business world.

The profitability phenomenon anchored to ROA arises when a notable shift takes place in a company's ROA figure, encompassing both upward and downward movements, potentially stemming from a range of factors both within the company and from the broader environment. The subsequent table illustrates the problematic occurrences highlighted by researchers focusing on property and real estate sector businesses that are publicly traded on the Indonesian Stock Exchange:

Table 1. Return on Assets (ROA) in the Property and Real Estate Sector

No.	Company Code	Return on Aset (ROA)		
		2021	**2022**	**2023**
1.	AMAN	3,35%	3,57%	5,25%
2.	APLN	-1,63%	7,92%	4,11%
3.	ASPI	-0,66%	-3,19%	-2,58%
4.	ASRI	0,65%	4,92%	2,86%
5.	ATAP	5,97%	1,86%	0,14%
6.	BAPA	-1,47%	-2,74%	-2,11%
7.	BAPI	-0,15%	-0,01%	-0,19%
8.	CITY	0,13%	2,27%	0,19%
9.	DADA	0,80%	0,13%	0,19%
10.	ELTY	-2,46%	-9,12%	-12,8%
11.	GPRA	2,81%	4,28%	4,93%
12.	INPP	0,46%	0,75%	1,97%

Source: Processed Data IDX 2025

Trimitra Prawara Goldland Tbk (ATAP) experienced a decline in Return on Assets from 2021 to 2023 due to intense competition in the property and real estate sector. Meanwhile, Perdana Gapuraprima Tbk (GPRA) and Indonesian Paradise Property Tbk (INPP) experienced increases in each period from 2021 to 2023. Alam Sutera Reality Tbk (ASRI) and Diamond Citra Propertindo Tbk (DADA) experienced fluctuations in Return on Assets (ROA) from 2021 to 2023 due to internal factors. Therefore, the above problems likely occurred due to reduced revenue caused by weak company performance, coupled with intense competition in property and real estate industry, and increasing costs over time, which leads to a decrease in ROA.

Drawing upon the empirical insights of Agustina & Avriyanti (2024), who investigated the interplay between capital structure and financial outcomes within telecommunications firms listed on the Indonesia Stock Exchange (IDX) during 2015–2020, a positive correlation was observed, wherein elevated capital structure coincided with enhanced profitability. In contrast, Amin et al (2023) in their exploration of banking institutions, posited that capital structure bears no significant influence on profitability when examined alongside firm size and liquidity. and Hermanto & Dewinta (2023) similarly concluded that firm size exerts no discernible impact on profitability, a

stance echoed by Sugianto & Meirisa (2023), who noted only a marginal effect. Conversely, the findings of Tirtanata & Yanti (2021) lend credence to (Ginting, 2019)assertion that firm size does indeed shape profitability outcomes. The divergence in these scholarly positions underscores the presence of an empirical gap concerning the nexus between firm size and profitability.

This analysis is based on a study by Lorenza et al (2020) that looked at how capital structure and business size affected the profitability of automakers listed on the Indonesia Stock Exchange (IDX). In order to improve the analysis and increase the research scope, the researchers advise extending the observation time, examining other business sectors that are also listed on the IDX, and adding more factors. By including a mediating variable that connects the predictor and outcome variables, this study deviates significantly from earlier studies. Previous research that did not include mediating or moderating variables did not find this feature. Additionally, the research object and observation duration are where the differences are found. This study, which has an observation period of 2020–2023, focuses on property and real estate firms listed on the Indonesia Stock Exchange (IDX), whereas earlier studies concentrated on automobile companies listed on the IDX.

THEORETICAL STUDY

Signal Theory

Signal theory involves the steps taken by a firm's leaders to give investors insights into their views on the company's future performance. The idea behind this theory is that every action carries information because of the imbalance in what different parties know. As stated by Ghozali (2018), signal theory details the ways that senders use strategies to have an impact on how those receiving the signals act. These signals can show up in numerous ways, from those that are easily seen to those that need a more detailed review to be properly understood.

Supandi et al (2023) clarifies that signalling theory suggests a company's strong financial report serves as a positive indicator of its overall health. Managers have a duty to keep company owners informed about the company's status as part of their management role. Signalling theory clarifies that companies aim to share details due to a disparity in knowledge between the company and outside groups like investors and lenders. This disparity drives companies to share data, which helps lessen the uncertainty that outside parties' experience regarding the company and its potential future. In this situation, signalling describes how businesses share information to lessen uncertainty and give a sense of their financial soundness and potential profits.

Profitability

A company's capacity to yield earnings is shown in its profitability. Investors use profitability ratio as a guide to measure how well a company is doing, which helps them decide where to put their money. Functioning as a comparative metric, this ratio enables the evaluation of key financial components, primarily those embedded in the balance sheet and income statement. Longitudinal analysis through successive periods allows for tracking the trajectory of organizational growth. Yusuf et al (2022) define profitability as the capacity of each business actor to generate profits and the measurement of profit realization (Setiowati et al (2023). Therefore, the profitability ratio is very helpful for investors in assessing whether a company is worthy of investment. According to Sutanto (2021), investors use a company's financial performance, in addition to its stock price, to determine whether an investment is worthwhile. One method for measuring company performance is through profitability analysis.

According to Amin et al (2023) explained this ratio is intended to help or determine whether a company is successful or not. Profitability is not only driven by a large amount of revenue, but also how well operational management manages working capital. High profits can indicate that the company has strong technology and is easily able to obtain creditors and investors, indicating that the company has a bright future. In research by Lorenza et al (2020), a business's ability to generate profits over a period of time by effectively utilizing sales, assets, and capital is known as profitability. A high level of profitability is an important indicator of a business's operational effectiveness.

Capital Structure

A well-functioning capital structure is essential for businesses in the manufacturing industry. By combining money from debt and equity, a company's capital structure can finance asset expansions. It also involves figuring out the balance between money from shareholders, known as equity, and borrowed funds, referred to as debt. A good capital structure is very important because it has an effect on things like risk, the price of getting money, and how much profit you might make on your investments. When a company handles its capital structure in a smart way, it can make itself more valuable and make sure it stays in business without interruption. Capital structure, which relates to the risks and rewards perceived by shareholders, is a crucial factor to consider when investing. Investors require information from a company's financial statements to assess its capital structure. The balance between foreign capital and equity is referred to as capital structure. Companies with high profitability show increasing revenues (Anggita et al., 2024).

Effective capital structure management is a sign of a well-managed business. A company's financial condition, and ultimately, its profitability, can be directly influenced by the quality of this capital structure. This financial structure consists of a combination of debt and equity funds (Bastian et al., 2024). The financial composition of a business, illustrating the mix of its funding sources, is known as its capital structure, which includes long-term debt and the company's own equity (shareholders' funds). Supandi et al (2023) explain that a company’s reliance on debt to support its asset base is encoded in its capital structure. By decoding this financial architecture, investors may navigate the tension between lucrative outcomes and the spectre of risk. (Mudjijah et al., 2019)stated that the balance between debt and equity indicates a capital structure that is a permanent expenditure.

Company Size

The evaluation of a business's size might be seen as an effort to ascertain its overall scope. For those who invest, the scale of a company is critically important due to its correlation with the degree of investment risk involved. Obtaining funds from multiple avenues is more straightforward for larger companies. Thus, there is increased motivation for large companies to strive for profitability, which in turn makes investors more discerning when it comes to their analysis.

Natalya & Maimunah (2022) define company size as a metric or value that divides businesses into large and small categories based on factors such as stock value, logarithmic size, total assets, and so on. Generally, there are only three types of business size: large, medium, and small. Yusmaniarti et al (2023) define company size as the total assets of an organization. A company's management will have more freedom to use its assets for operational purposes if it has significant assets. Agustina & Avriyanti (2024) stated that company size describes how large or small its assets are.

According to Bita et al (2021), a substantial company size indicates expansion, which is viewed positively by investors. Lorenza et al (2020) state that larger companies can utilize a wider range of funding options from various sources, simplifying the process of obtaining loans from lenders due to their increased capacity to grow or survive in their sector. Meanwhile, according to Amin et al (2023) explain that a company's assets determine its company size. The profits a company makes can be influenced by the amount of assets it possesses. Securing capital tends to be easier for companies with substantial assets. By showcasing the assets it holds, a company can often persuade investors to allocate their money to the company.

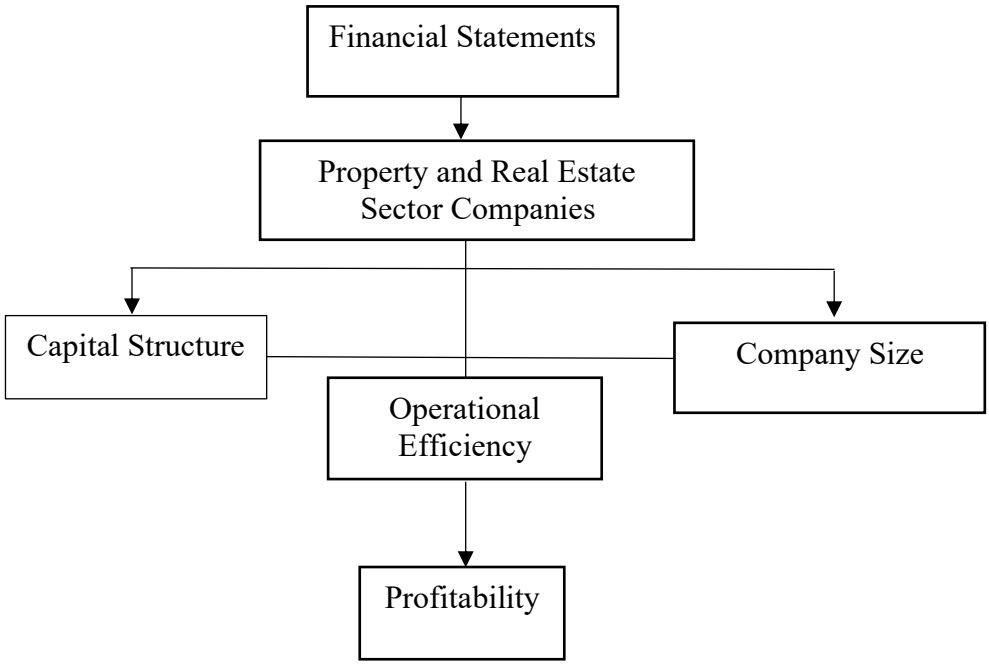
Operational Efficiency

According to Hermanto & Dewinta (2023), operational efficiency is indicated by how quickly a company's assets are used to generate revenue. Managing a company efficiently by turning over assets can increase profits. Therefore, if asset turnover decreases, it means the company is not utilizing its assets effectively. Efficiency is a metric that contrasts a process's output value with its input value. In this instance, input is the total expenses incurred to produce the revenue, and output is the total revenue from operations for a certain period.

According to Wihardianto et al (2023) delineate that efficiency represents a comparison of the tangible production with the inputs utilized. A greater level of efficiency is attained when the output compared to resources used is higher. Efficiency can be described as successfully creating the most output possible through the use of particular resources. Efficiency will also be better if the results obtained are more than the resources consumed.

According to Yuniari & Badjra (2019), a company's effectiveness is essentially its capability to utilize resources wisely, avoiding any wastage. An indicator of how well a business controls its efficiency is the ratio of operating costs to operating income, or BOPO.

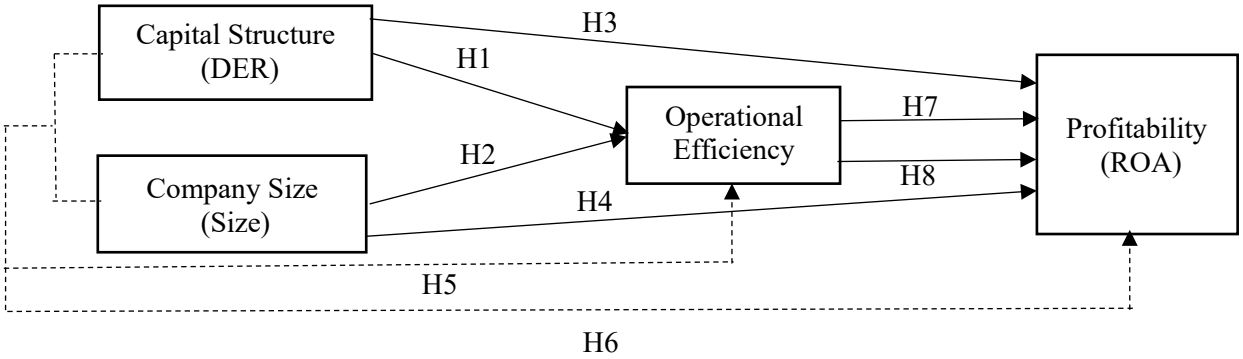
Figure 1. Research Framework and Hypothesis



Source: Processed Data 2024

The research framework diagram shows that this study uses financial reports from companies in the property and real estate sector as the primary data source. From this data, two independent variables, capital structure and firm size, are analyzed to determine their impact on firm performance. Furthermore, capital structure and firm size are assumed to influence operational efficiency, which acts as an intervening variable. Operational efficiency is then linked to profitability, the primary dependent variable. This framework illustrates that firm profitability is not only directly influenced by the firm's financial characteristics but also through the level of operational efficiency resulting from the management of capital structure and firm scale.

Figure 2. Hipothesis



Research Hypothesis

H1: Capital Structure Affects Operational Efficiency

H2: Firm Size Affects Operational Efficiency

H3: Capital Structure Affects Profitability

H4: Company Size Affects Profitability

H5: Operational efficiency is influenced by business size and capital structure.

H6: Firm size and capital structure affect profitability.

H7: Through operational efficiency as an intervening variable, capital structure has an indirect impact on profitability.

H8: As an intervening variable, operational efficiency has an indirect impact on profitability.

RESEARCH METHODS

Throughout the procedure, this study employed a descriptive approach and quantitative methodology tailored to the type of data used. The research sample included companies in the real estate and property industries.

Research Design

The research method used was a quantitative approach with path analysis. A purposive sampling technique resulted in 78 companies as research samples, resulting in 234 observations during the observation period. Data processing was performed using software version 25. This study focused on property and real estate companies listed on the Indonesia Stock Exchange (IDX) during the 2020–2023 period.

Research Subject

The population used in this study is 92 companies in the property and real estate sector listed on the Indonesia Stock Exchange from 2020 to 2023. The sampling technique in this study uses a

purposive sampling technique, namely by taking a sample of companies during the research period based on the following criteria: Property and Real Estate Sector Companies listed on the Indonesia Stock Exchange in 2021-2023, Property and Real Estate Sector Companies that published financial reports consecutively during the research period 2021-2023, Property and Real Estate Sector Companies that have complete data required.

Operational Definition of the Variable

Profitability

The capability of a business to yield earnings across a defined timeframe is gauged via a performance metric known as profitability (Gultom, 2021). Profitability effectively illustrates the degree to which a business is capable of overseeing every investment initiated by its proprietors, intending to amplify earnings throughout a particular duration.

$$ROA = \frac{\text{Net Profit}}{\text{Total Assets}} \times 100\% \quad (1)$$

Capital Structure

The term "capital structure" describes how a company obtains and utilizes its financial resources, both those generated internally and those sourced from outside entities. The capital structure holds significance due to its immediate connection with the economic health of the company. Businesses are able to create strategies regarding the most effective capital structure in order to increase advantages for shareholders. A capital structure is considered optimal when it successfully harmonizes potential risks with possible financial benefits, which leads to a rise in the company's worth (Aslindar & Lestari, 2020).

$$DER = \frac{\text{Total Debt}}{\text{Total Equity}} \times 100\% \quad (2)$$

Company Size

Corporate scale is quantified through the aggregation of asset holdings maintained within a specified reporting horizon. A company's ability to secure more cash increases with its size (Rahayu & Sitohang, 2019). Regardless of size, a company's capacity to grow and develop its business using funds from banks or the capital market might be reflected in its size.

$$SIZE = Ln(\text{Total Assets}) \quad (3)$$

Operational Efficiency

According to (Febriyanti et al., 2025), a subset of activity ratios called operational efficiency evaluates how well a business uses its resources. This efficiency assesses operations that can speed up the creation of liquidity by comparing revenue with different asset investments over a given time period.

$$BOPO = \frac{\text{Operating Costs}}{\text{Operating Income}} \times 100\% \quad (4)$$

RESULTS AND DISCUSION

Descriptive Statistic Analysis

Descriptive statistical outcomes reveal that the empirical foundation of this study comprises 306 distinct observations (N = 306). The scaling framework employed for each indicator is articulated within the descriptive analysis output.

Table 2. Descriptive Statistical Analysis

	N	Minimum	Maximum	Mean	Standart. Deviation
Capital Structure	306	-76,75	57,60	0,4511	7,01939
Company Size	306	2,62	3,49	3,2574	0,16400
Operational Efficiency	306	-8,17	0,81	-0,2487	0,76579
Profitability	306	-1,92	8,51	0,0500	0,55830
Valid N	306				

Source: SPSS Data Processing 2025

According to the descriptive statistical evaluation, the dispersion of the dataset utilized in this study is outlined that capital structure (X1) exhibits a central tendency of 0.4511, accompanied by a dispersion index (standard deviation) of 7.01939. The observed values span from a minimum of -76.75 to a peak of 57.60, as detailed in Table 4.1. company size (X2) indicator reflects a mean value of 3.2574 and a standard deviation of 0.16400, with the data ranging between 2.62 and 3.49, as presented in Table 2. operational efficiency (Z) metric records an average of -0.2487 and a standard deviation of 0.76579. The values fluctuate from a low of -8.17 to a high of 0.81, as shown in Table 4.1. Profitability (Y) variable demonstrates a mean of 0.0500 and a standard deviation of 0.55830, with the data bounded by a minimum of -1.92 and a maximum of 8.51.

Classical Assumption Test Results

Data Normality Test Results

Table 3. One-Sample Kolmogorov-Smirnov Test for Normality

		Unstandardized Residual
N		30
Normal Parameters[a,b]	Mean	,0000000
	Standart. Deviation	7,29756837
Most Extreme Differences	overall	,088
	Positive	,069
	Negative	-,088
Test Statistic		,088
Asymp. Sig. (2-tailed)		,200[c,d]

a. Tes distribution is Normal.
b. Calculated from data.
c. Lilliefors Significance Correction.
d. This is a lower bound of the true significance.

Source: SPSS Data Processing 2025

It is evident from Table 3 that the study's data are regularly distributed. The Asymp. Sig. (2-tailed) value of 0.200, which is higher than the significance criterion of 0.05 (0.200 > 0.05), supports this conclusion. Therefore, it can be said that the normalcy assumption has been satisfied.

Multicollinearity Test Results

Table 4. Multicollinearity Test Results

Model		Unstandardized Coefficients		Standardized Coefficients	t	Sig.	Collinearity Statistics	
		B	Standart. Error	Beta			Tolerance	VIF
1	(Constant)	-240,414	55,149		-4,359	,000		
	Capital Structure	-6,322	1,959	-,416	-3,227	,003	,866	1,155
	Company Size	75,024	16,438	,583	4,564	,000	,880	1,137
	Operational Efficiency	-1,098	1,225	-,112	-,896	,378	,915	1,093

a. Dependent Variable: Profitability

Source: SPSS Data Processing 2025

Referring to Table 4, the analysis findings indicate no multicollinearity issues in the following study data. The Capital Structure variable (X1), operationalized through the Debt-to-Equity Ratio (DER), yields a tolerance coefficient of 0.866 and a Variance Inflation Factor (VIF) of 1.155, thereby indicating no presence of multicollinearity. Similarly, Firm Size (X2), derived via the natural logarithmic transformation of total assets (LN Total Assets), registers a tolerance of 0.880 and a VIF of 1.137, further affirming the absence of collinearity concerns. In parallel, the Operational Efficiency construct (Z), measured through the BOPO ratio, demonstrates statistical independence with a tolerance value of 0.915 and a VIF of 1.093.

Heteroscedasticity Test Results

Table 5. Heteroscedasticity Test Results

Model		Unstandardized Coefficients		Standardized Coefficients	t	Sig.
		B	Std. Error	Beta		
1	(Constant)	60,627	29,557		2,051	,050
	X1	-1,097	1,050	-,206	-1,045	,306
	X2	-15,992	8,810	-,355	-1,815	,081
	Z	-,117	,656	-,034	-,179	,860

a. Dependen Variable: ABS_RES

Source: SPSS Data Processing 2025

Table 5 demonstrates that all of the variables in the regression equation have significance levels more than 0.05; X1 has a value of 0.306, X2 has a value of 0.081, and Z has a value of 0.850. It may be inferred that the regression model employed in this investigation does not exhibit heteroscedasticity issues because each of these values is higher than 0.05.

Autocorrelation Test

Table 6. Autocorrelation Test

Model Summary[b]					
	R	**R Square**	**Adjusted R Square**	**Std. Error of the Estimate**	**Durbin-Watson**
1	,752[a]	,565	,515	7,96414	2,006
a. Predictors: Z, X2, X1					
b. Dependent Variable: Y					

Source: SPSS Data Processing 2025

Referring to Table 6 mentioned above, the Durbin-Watson number was recorded at 2.006. By considering the previous provisions, the Durbin-Watson value obtained reached 2.315, Therefore, it can be said that there is no autocorrelation, even though the Durbin-Watson number in this investigation was 1.580.

Hypothesis Testing
Partial Test (t)

Table 7. Results of the First Model t-Test (X1 and X2 against Z as a Mediating)

	Unstandardized Coefficients		**Std. Coefficients**	**t**	**Sig.**
	B	**Std. Error**	**Beta**		
(Constant)	-632,093	240,556		-2,628	,010
X 1	-6,092	11,448	-,045	-,532	,596
X 2	510,640	202,144	,211	2,526	,013
a. Dependent Variable: Z					

Source: SPSS Data Processing 2025

Referring to Table 7, the t-test results yield the following interpretations: The Capital Structure variable (X1) presents a significance level of 0.596, exceeding the conventional threshold of 0.05, and a computed t-statistic of -0.532, which falls below the critical t-table value of 1.992. These figures suggest that variable Z is not meaningfully affected by X1, thereby leading to the rejection of hypothesis H1. In contrast, the Firm Size variable (X2) demonstrates statistical relevance, with a significance value of 0.013, well beneath the 0.05 benchmark, and a t-statistic of 2.529, surpassing the critical value of 1.992. Therefore, it can be said that Z is significantly influenced by the variable X2, which results in the acceptance of H2.

Table 8. Results of the Second Model t-Test

	Unstandardized Coefficients		Std. Coefficients		Sig.
	B	Standart. Error	Beta		
(Constant)	-55,303	62,190		-0,889	0,375
X1	-13,183	2,890	-0,363	-4,561	0,000
X2	49,314	52,164	0,077	0,945	0,346
Z	0,016	0,022	0,061	0,750	0,455

a. Dependent Variable: Y

Source: SPSS Data Processing 2025

As delineated in Table 8, the Capital Structure variable (X1) exhibits a computed t-statistic of -4.561, which falls below the critical threshold of 1.992, alongside a significance level of 0.000, well beneath the conventional 0.05 cutoff. These metrics substantiate a statistically significant effect of X1 on the dependent variable Y, thereby validating hypothesis H3. In contrast, the Firm Size variable (X2) registers a significance value of 0.346, exceeding the 0.05 benchmark, and a t-statistic of 0.945, which does not surpass the critical value of 1.992. Consequently, X2 is deemed to have no meaningful impact on Y, leading to the rejection of hypothesis H4.

Simultaneous Test Results (f)

Table 9. First Model F-Test Results

ANOVA[a]

Model		Sum of Squares	df	Mean Square	F	Sig.
1	Regression	55440,263	2	27720,132	3,332	0,039[b]
	Residual	1131267,521	136	8318,144		
	Total	1186707,784	138			

a. Dependent: Z

b. Predictors: X2, X1

Source: SPSS Data Processing 2025

The calculated F value for the results shown in Table 9 is 3.332, with a significance level (Sig.) of 0.039. The significance value obtained is smaller than the 5% significance level (0.05) (0.039 < 0.05). This indicates that the mediating variable Operational Efficiency (Z) is simultaneously significantly influenced by the independent variables Capital Structure (X1) and Company Size (X2). Thus, it can be said that H5 is accepted, which indicates that in the first model, Operational Efficiency is influenced by Capital Structure and Company Size.

Table 10 Results of the Second Model F-Test (X1, X2, Z Against Y)

ANOVA[a]						
Model		**Sum of Squares**	**df**	**Mean Square**	**F**	**Sig.**
1	Regression	12169,015	3	4056,338	7,667	0,000[b]
	Residual	71427,978	135	529,096		
	Total	83596,993	138			

a. Dependent: Y

b. Predictors: Z, X1, X2

Source: SPSS Data Processing 2025

The calculated F value, with a significance level (Sig.) of 0.000, is 7.667 with reference to the results shown in Table 10. The significance value obtained is smaller than the 5% significance criterion (0.05) (0.000 < 0.05). This indicates that the dependent variable of Firm Value (Y) is simultaneously significantly influenced by the independent variables of Capital Structure (X1), Firm Size (X2), and the mediating variable of Operational Efficiency (Z). Thus, it can be said that H6 is accepted, which indicates that in the second model, Capital Structure, Firm Size, and Operational Efficiency jointly influence Firm Value.

Coefficient of Determination (R2) Test

Table 11. Results of the Coefficient of Determination (R2) Test for the First Model

Model Summary				
Model	**R**	**R Square**	**Adjusted R Square**	**Std. Error of the Estimate**
1	0,216[a]	0,047	0,033	91,20386

a. Predictors: X2, X1

Source: SPSS Data Processing 2025

Table 11 shows that the model overview's modified R Square value is 0.027. This result shows that variables X1 and X2 contribute 3.3% to variable M, with other factors not covered in this study influencing the remaining 96.7%. However, the formula e1 = √(1 - 0.047) can be used to compute the e1 value, yielding a result of 0.9762.

Table 12. Results of the Coefficient of Determination (R2) Test for the Second

Model Summary				
Model	**R**	**R Square**	**Adjusted R Square**	**Std. Error of the Estimate**
1	0,382[a]	0,146	0,127	23,00209

a. Predictors: Z, X1, X2

Source: SPSS Data Processing 2025

Table 12 shows that the variables Capital Structure (X1), Company Size (X2), and Operational Efficiency (Z) together have an influence of 12.7% on the variation in Company Value (Y), with an e_1 value of $\sqrt{(1 - 0.146)} = 0.9241$ which indicates that there is a fairly large external influence on Company Value.

Sobel Test Results

Testing the hypothesis that X1 (Capital Structure) affects Y (Profitability) through Z (Operational Efficiency):

β : Regression coefficient of X1 on Z = -6.092
β : Regression coefficient of Z on Y = 0.016
Sβ : Standard error of variable X1 = 11.448
Sβ : Standard error of variable Z = 0.022

The following are the results of the online Sobel test:

Sobel test statistic = -0.42945896
One-tailed probability = 0.33379463
Two-tailed probability = 0.66758925

The Sobel test is used to assess the significance of the indirect effect of independent variables on dependent variables through mediating variables. In this study, the Sobel test aims to examine whether operational efficiency (Z) can act as a mediating variable in the relationship between capital structure (X1) and profitability (Y). Based on the calculation results, the Sobel test statistic is -0.429, indicating a negative indirect effect. However, this statistic falls below the critical value of ±1.96 at the 5% significance level. Furthermore, the one-sided probability value of 0.334 and the two-sided probability value of 0.668 indicate that the test result is not statistically significant because it exceeds the 0.05 significance level. These results indicate that the combined effect of capital structure on operational efficiency and operational efficiency on profitability is not strong enough to establish a significant mediating pathway. In other words, although capital structure influences operational efficiency and operational efficiency is related to profitability, the indirect effect formed through operational efficiency does not contribute significantly to changes in profitability.

Hypothesis testing of the effect of X2 (Company Size) on Y (Profitability) through Z (Operational Efficiency):

β : Regression coefficient of X2 on Z = 510.640
β : Regression coefficient of Z on Y = 0.016
Sβ : Standard error of variable X2 = 202.144
Sβ : Standard error of variable Z = 0.022

The following are the results of the online Sobel test:

Sobel test statistic value = 0.69888501
One-tailed probability = 0.24231195
Two-tailed probability = 0.48462390

The Sobel test was used to test the significance of the indirect effect of firm size (X2) on profitability (Y) through operational efficiency (Z) as a mediating variable. Based on the estimation results, the regression coefficient of firm size on operational efficiency was positive at 510.640, while the regression coefficient of operational efficiency on profitability was 0.016. The Sobel test calculation results showed a statistical value of 0.699, which is below the critical value of ±1.96 at the 5% significance level. Furthermore, the one-sided probability value of 0.242 and the two-sided probability value of 0.485 are greater than the 0.05 significance level. Thus, the indirect effect of firm size on profitability through operational efficiency is declared statistically insignificant. This finding indicates that although firm size influences operational efficiency and operational efficiency is related to profitability, the mediating pathway is not strong enough to explain changes in firm profitability. Therefore, operational efficiency does not act as a mediating variable in the relationship between firm size and profitability in property and real estate companies.

CONCLUSION

The analytical outcomes reveal that firm size does not exert a statistically significant influence on operational efficiency, whereas capital structure demonstrates a notable effect. Additionally, while firm size fails to significantly shape profitability, capital structure emerges as a determinant factor. Moreover, both financial leverage and organizational scale collectively contribute to variations in profitability and operational performance. Nonetheless, operational efficiency does not function as a mediating mechanism in the linkage between capital structure and profitability, nor in the association between firm size and profitability. By presenting empirical data on the correlation between capital structure, business size, operational efficiency, and profitability in Indonesia's property and real estate industry, this study theoretically advances the fields of financial management and accounting.

These results contribute to the theoretical understanding of how operational efficiency serves as a mediating factor between financial performance (profitability) and financing decisions (capital structure). Additionally, this analysis clarifies discrepancies in earlier studies, especially with regard to the impact of business size and capital structure on profitability, which often results in disparate outcomes across industry sectors. Furthermore, this study adds a new perspective by using the 2020–2023 period, reflecting post-COVID-19 pandemic economic conditions. Thus, this study provides a more up-to-date picture of how property and real estate companies adapt to economic pressures and how operational efficiency can be a determining factor in maintaining profitability during the economic recovery. Practically, the findings of this study can be taken into account by business management when creating more effective operational and financial policies.

This study only looks at real estate and property companies that are listed on the Indonesia Stock Exchange (IDX), its conclusions might not apply to other industries. The inconsistency of data across years, due to some companies not regularly publishing annual reports or sustainability reports, limits the completeness and comparability of the dataset. The three-year observation period provides only a short-term perspective, which may not comprehensively capture long-term trends or effects in the relationship among the studied variables.

REFERENCE

Agustina, J., & Avriyanti, S. (2024). Pengaruh Struktur Modal terhadap Profitabilitas pada Perusahaan Telekomunikasi yang Terdaftar di Bursa Efek Indonesia (BEI) Periode 2015-2020. *JAPB*, *7*(2), 1720–1737. https://doi.org/10.35722/japb.v7i2.1112

Amin, M. A. N., Utami, Y., & Aji, W. Y. (2023). Pengaruh Struktur Modal, Ukuran Perusahaan, dan Likuiditas Terhadap Profitabilitas pada Perusahaan Perbankan. *Jurnal Audit Dan Perpajakan (JAP)*, *1*(2), 114–129. https://doi.org/10.47709/jap.v1i2.2156

Anggita, D., Dewi, S., & Safitri, A. (2024). Pengaruh Perputaran Kas, Struktur Modal, Pertumbuhan Laba dan Ukuran Perusahaan Terhadap Profitabilitas. *Permana : Jurnal Perpajakan, Manajemen, Dan Akuntansi*, *16*(1), 197–209. https://doi.org/10.24905/permana.v16i1.339

Aslindar, D. A., & Lestari, U. P. (2020). Pengaruh Profitabilitas, Likuiditas dan Peluang Pertumbuhan Terhadap Nilai Perusahaan dengan Struktur Modal sebagai Variabel Intervening. *Dinamika Akuntansi, Keuangan Dan Perbankan*, *9*(1), 91106. https://www.unisbank.ac.id/ojs/index.php/fe9/article/view/8232/3161

Bastian, P., Burhanuddin, B., Rauf, A., Kurniawan, A. W., & Nurman, N. (2024). Pengaruh Struktur Modal Terhadap Profitabilitas Perusahaan. *Economics Professional in Action (E-Profit)*, *6*(1), 16–27. https://doi.org/10.37278/eprofit.v6i1.799

Bita, F. Y., Hermuningsih, S., & Maulida, A. (2021). Pengaruh Profitabilitas Likuiditas dan Ukuran Perusahaan terhadap Nilai Perusahaan. *Jurnal Syntax Transformation*, *2*(03), 298–306. https://doi.org/10.46799/jst.v2i3.233

Febriyanti, S., Citradewi, A., & Penulis, N. (2025). *Efisiensi Operasional sebagai Mediator antara Likuiditas, Leverage, dan Profitabilitas Perusahaan Properti*. *16*(1).

Ghozali, I. (2018). *Aplikasi Analisis Multivariate dengan Program IBM SPSS 25* (9th ed.). Badan Penerbit Universitas Diponegoro.

Ginting, G. (2019). Pengaruh Ukuran Perusahaan, Pertumbuhan Perusahaan, Keputusan Investasi, dan Struktur Modal Terhadap Profitabilitas Perusahaan Properti, Konstruksi dan Real Estate yang Terdaftar di Bursa Efek Indonesia Periode 2007-2017. *Ilmiah Berkala*, *13*, 119–126. https://ejournal.poltektedc.ac.id/index.php/tedc/article/view/55/36

Gultom, J. (2021). Pengaruh Profitabilitas, Leverage, dan Likuiditas terhadap Tax Avoidance. *JABI (Jurnal Akuntansi Berkelanjutan Indonesia)*, *4*(2), 239–253. https://doi.org/10.32493/JABI.v4i2.y2021.p239-253

Hermanto, H., & Dewinta, A. (2023). Pengaruh Ukuran Perusahaan, Efisiensi Perusahaan, Likuiditas, Kekuatan Pasar, Pertumbuhan Perusahaan Dan Leverage Terhadap Profitabilitas. *Jurnal Ilmiah Manajemen, Ekonomi, & Akuntansi (MEA)*, *7*(2), 846–871. https://doi.org/10.31955/mea.v7i2.3060

Lorenza, D., Kadir, M. A., & Sjahruddin, H. (2020). Pengaruh Struktur Modal dan Ukuran Perusahaan terhadap Profitabilitas pada Perusahaan Otomotif yang Terdaftar di Bursa Efek Indonesia. *Jurnal Ekonomi Manajemen*, *6*(1), 13–20. https://doi.org/10.37058/jem.v6i1.1544

Mudjijah, S., Khalid, Z., & Astuti, D. A. S. (2019). Pengaruh Kinerja Keuangan dan Struktur Modal terhadap Nilai Perusahaan yang Dimoderasi Variabel Ukuran Perusahaan. *Jurnal Akuntansi Dan Keuangan*, *8*(1), 41–56.

Natalya, D., & Maimunah, M. (2022). Pengaruh Leverage, Likuiditas dan Ukuran Perusahaan terhadap Profitabilitas. *Jurnal Informasi Akuntansi (JIA)*, *1*(2). https://doi.org/10.32524/jia.v1i2.530

Rahayu, P. D., & Sitohang, S. (2019). Pengaruh Profitabilitas, Leverage, Likuiditas, dan Ukuran Perusahaan Terhadap Pertumbuhan Laba. *Jurnal Ilmu Dan Riset Manajemen*, *8*(6), 1–18.

Setiowati, D. P., Salsabila, N. T., & Eprianto, I. (2023). Pengaruh Ukuran Perusahaan, Leverage, dan Profitabilitas Terhadap Manajemen Laba. *Jurnal Economina*, *2*(8), 2137–2146. https://doi.org/10.55681/economina.v2i8.724

Sugianto, C. A., & Meirisa, F. (2023). Pengaruh Leverage dan Ukuran Perusahaan Terhadap Profitabilitas. *MDP Student Conference*, *2*(2), 197–204. https://doi.org/10.35957/mdp-

sc.v2i2.4386

Supandi, A., Goenawan, Y. A., Ilmu, S. T., & Ppi, E. (2023). Pengaruh Profitabilitas Terhadap Nilai Perusahaan dengan Struktur Modal Sebagai Variabel Intervening (Studi Kasus Pada Perusahaan Yang Terdaftar Pada IDX 30). *Intelektual*, *2*(2), 116–125. https://ejournal.stieppi.ac.id/index.php/jin/116

Sutanto, C. (2021). Literature Review: Pengaruh Inflasi dan Leverage Terhadap Profitabilitas dan Return Saham. *Jurnal Ilmu Manajemen Terapan*, *2*(5), 589–603. https://doi.org/10.31933/jimt.v2i5.567

Tirtanata, P., & Yanti, L. D. (2021). Pengaruh Ukuran Perusahaan, Perputaran Modal Kerja dan Leverage Terhadap Profitabilitas Pada Perusahaan Manufaktur Sektor Industri Barang Konsumsi yang Terdaftar di Bursa Efek Indonesia Periode 2017-2019. *ECo-Fin*, *3*(1), 172–188. https://doi.org/10.32877/ef.v3i1.399

Wihardianto, I., Utomo, M. N., & Milwan, M. (2023). Pengaruh Mekanisme Corporate Governance Terhadap Kinerja Perusahaan Dengan Variabel Mediasi Efisiensi Operasional. *Jurnal Ilmiah Manajemen, Ekonomi Bisnis, Kewirausahaan*, *11*(1), 488–502. https://doi.org/10.30640/ekonomika45.v11i1.1886

Yuniari, N. P., & Badjra, I. B. (2019). Pengaruh Likuiditas, Efisiensi, dan Ukuran Bank Terhadap Profitabilitas. *Jurnal Ilmiah Manajemen, Ekonomi Bisnis, Dan Kewirausahaan*, *8*(6), 3502. https://doi.org/10.24843/EJMUNUD.2019.v08.i06.p08

Yusmaniarti, Y., Sumarlan, A., Astuti, B., & Ananda, N. A. (2023). Pengaruh Ukuran Perusahaan Dan Struktur Modal Terhadap Nilai Perusahaan Yang Dimoderasi Corporate Social Responsibility . *EKOMBIS REVIEW: Jurnal Ilmiah Ekonomi Dan Bisnis*, *11*(1), 641–652.

Yusuf, M., Sutrisno, S., Putri, P. A. N., Asir, M., & Cakranegara, P. A. (2022). Prospek Penggunaan E-Commerce Terhadap Profitabilitas dan Kemudahan Pelayanan Konsumen: Literature Review. *Jurnal Darma Agung*, *30*(3), 505. https://doi.org/10.46930/ojsuda.v30i3.2268